

THE WOLF SPIDERS OF AUSTRALIA (ARANEAE: LYCOSIDAE): 10.
A NEW SPECIES OF THE GENUS *FLANONA* SIMON

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ABSTRACT

The genus *Flanona*, previously known from one species *Flanona puellula* Simon 1898 from Ceylon, is reported from northwest Australia. A new species, *Flanona minuta*, is described.

The construction of the Main Dam, Ord River, in the East Kimberley area of Western Australia, was completed in 1971. The area now inundated by Lake Argyle was surveyed by the Western Australian Museum, prior to the 1971-72 wet season, to determine the species diversity and the habitats occupied by the vertebrate animals, molluscs and spiders. During the course of this survey a large collection of lycosid spiders was made by the author. An attempt was made to collect lycosid spiders from all habitats represented in the area, to fully document the lycosid fauna. One habitat investigated was the banks of small creeks that originate in mound springs or swamps at the spring-line of rocky cliffs and valley-like depressions within the ranges. At one site situated at the base of a small rock outcrop some 5 km southwest of Old Lissadel Homestead, the spring consisted of a large mound, some 3 to 4 metres high and about 20 metres in diameter, composed of decaying fern remains broken down to the consistency of peat-moss; live ferns (*Acrostichum speciosum* Willd) were scattered over the surface of the mound, adding their fronds to the accumulation of organic material. The rotting trunks of dead ferns were rapidly breaking down under the hot humid conditions to build up the mound of moist crumbly material (Pl. 1 A,B). A small *Artoria* species was abundant over the surface of the mound. On disturbing the damp rotted vegetation, I was astonished to see a minute lycosid spider with a total body length of about 2 mm dragging an even smaller egg cocoon attached to the spinnerets. This small lycosid spider was not collected on the creek banks and appears to be confined to 'mound springs'.

The smallest lycosid spider is *Flanona puellula* known only from Sri Lanka. This species is easily

recognized by the arrangement of the eyes and was briefly described by Simon (1898) who states '*Flanona puellula* E. Sim. is the smallest lycosid known, it does not exceed the size of an erigonid and has the coloration of *Lycosa (Pirata) piratica* and *uliginosa*, I have found them on the beach at Pointe-de-Galle, dragging their little, round, white cocoon containing only 3-4 eggs.' The Australian specimens belong to the genus *Flanona* and are described below.

Genus *Flanona* Simon, 1898

Flanona Simon, 1898, pp. 338, 343, 349; type species by original designation *Flanona puellula* Simon, 1898.

DIAGNOSIS: Extremely small spiders; legs in order of decreasing length 4, 1, 2, 3; tibia of first leg with no more than 3 pairs of ventral spines (apical ventral spines present); first row of eyes straight, about as long as second row, and touching the inferior margin of the PM eyes; PM eyes about 1/5 of a diameter apart; retromarginal cheliceral teeth 2-3; fourth tibia with the proximal dorsal spine equal in size to the distal spine.

Two species. Sri Lanka and Australia.

Flanona minuta sp. nov.
(Fig. 1 A-D)

MATERIAL EXAMINED

HOLOTYPE: Western Australian Museum WAM 76-98, ♀M, C. L. 1.06 mm, Mound Spring, 5 km southwest of Old Lissadel Station Homestead, Ord River area, W.A., collected by R. J. McKay, October 13, 1971. In spirit.

PARATYPES: Mound Spring, data as above, 17 ♀M C. L. 0.9 mm-1.1 mm, 2 ♂P, 14J, QM W5810.

DESCRIPTION: Based on holotype.

Carapace pale brown with some very faint grey wedge-shaped markings radiating from the centre (Fig. 1A); paturon, sternum, coxae, and legs pale brown to light honey colour. Abdomen light grey above becoming dark grey posteriorly before spinnerets; sides pale grey; venter light brown. No distinct pattern on carapace or abdomen. Area between PM and PL eyes and behind PM eyes dark grey to dark brown.

Anterior row of eyes very slightly recurved, about equal in width to the second row which is situated immediately above the AM and AL eyes so that the bases are contiguous; AM eyes not on a raised mound; PM eyes with the lenses slightly less than half their diameter apart, the bases touching; PL eyes wide apart. Ratio of eyes in micrometer units (lenses only), AM:AL:PM:PL = 5:4:9:7; distance AM-AM 1.5, AM-AL 1, PM-PM 4, PL-PL 19. Length of first eye row 20; length of second eye row 19.

Chelicerae with 2+2 retromarginal teeth.

TABLE 1: MEASUREMENTS OF LEG SEGMENTS OF *F. MINUTA* IN MM

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus
1	0.81	0.24	0.59	0.56	0.42
2	0.73	0.20	0.63	0.56	0.41
3	0.71	0.28	0.52	0.59	0.38
4	0.96	0.28	0.88	0.98	0.35
Palp	0.35	0.17	0.22	—	0.38

VARIATION: Penultimate males have the same coloration as females. Five female paratypes had the paturon forced anteriorly to count the

retromarginal cheliceral teeth, all had 2+2, remaining paratypes not examined. All paratype females had 2+2 ventral spines on the tibiae of the anterior pair of legs, no apical spines were present. All paratypes had 1+1 spines on the dorsal surface of the femora. The epigynum and internal genitalia of a paratype female is illustrated in Fig. 1C, D.

SIZE RANGE: Mature females C.L. 0.9 to 1.1 mm.

DIAGNOSIS: Differs from *Flanona puellula* Simon, the only other species in the genus in having 2+2 retromarginal teeth instead of 3+3, a simple epigynum in the shape of a lightly sclerotized flap (Fig. 1C) instead of an oval epigynum with a poorly defined median guide as figured for *F. puellula* by Roewer 1960, fig. 465.

LIFE HISTORY

Mature females carrying egg cocoons were collected in October. The egg cocoons (8 examined) contained from 3 to 5 eggs measuring 0.38 to 0.43 mm in diameter. Two penultimate males were collected, but no mature males were found. The females carry the egg cocoon firmly attached to the spinnerets.

LITERATURE CITED

- ROEWER, C. F., 1960. Araneae Lycosaeformia 2 (Lycosidae). *Explor. Parc. Natn. Upemba Miss. G. F. de Witte* 55, pp. 519-1040, figs. 292-555.
- SIMON, E., 1898. *Histoire naturelle des Araignees*. 2nd ed. Vol. 2, Part 2, pp. 193-380. (Paris).

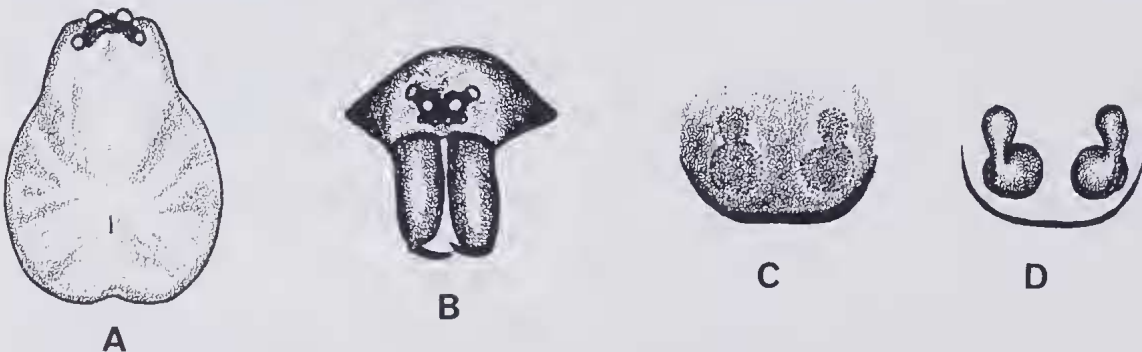


FIG. 1: *Flanona minuta*. A, carapace; B, face; C, epigynum; D, internal genitalia.

PLATE I

- FIG. A: Habitat of *Flanona minuta* showing *Acrostichum* fern in foreground.
- FIG. B: Habitat of *Flanona minuta* showing peat-moss consistency of fern remains.

